

Work Order ID 146521

Wednesday, May 18, 2016 1:45:13 PM

146521

Page 1

Item ID: D2804-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

630-033 - 034

Stop ***NS2***

Item Name: Bracket Assembly

Start Date: 5/19/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/25/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: Em Date: 16/05/18 Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2804	Rev C

100 0.00

100

Small Fab

Small Fab

Memo

0.20

Small Fab

Press D2805-1 Into arm as per Dwg D2804

110 0.00

110

QC5- Inspect part completeness to step on W/O

QC

Memo

0.08

Quality Control

125 0.00

125

Spray Painting per QSI005 4.2

SprayPaint

Memo

0.00

Spray Painting

Prime Tempo Grey 4500-P-23 per QSI005 4.2.1.3.2

134518

DAS
36
9-89

DAS
9
9-89

DAS
41
9-89

16-6-7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 146521

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146521

Page 2

Item ID: D2804-041

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N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket Assembly

Start Date: 5/19/2016 Start Qty: 4.00

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
135	QC14- Inspect Spray Paint	0.00				(4)			DAS 38 9-89

135

QC

Memo

0.00

Quality Control

JUN 08 2016

140

140

Small Fab

Small Fab

Memo

0.00

0.60

Small Fab

Press D2809 into arm as per Dwg D2804

4X

DAS
36
9-89
16/06/08

150

150

Small Fab

Small Fab

Memo

0.00

0.00

Small Fab

1-Spray LPS-3 on Bolt Shaft, not on thread as per Dwg D2804 2-Assemble as per Dwg D2804.

4X

DAS
36
9-89
16/06/08

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 146521

Wednesday, May 18, 2016 1:45:13 PM

146521

Page 3

Item ID: D2804-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bracket Assembly

Start Date: 5/19/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/25/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00				(4)			DAS 38 9-00 JUN 08 2016
160									
QC	Memo	0.08							
Quality Control									
170	Identify as per dwg & Stock Location: <u>St 472</u>	0.00				4			DAS 6 9-00 JUN 09 2016
170									
Packaging	Memo	0.04							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							16/6/9 JG
180									
QC	Memo	0.40							
Quality Control									

MCS JUN 08 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

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Page 1

Work Order ID: 146521

146521

Parent Item: D2804-041

D2804-041

Parent Item Name: Bracket Assembly

Start Date: 5/19/2016

Required Date: 5/25/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP F05.03.30MS21043-3 was MS21042L3KJ/JLM
IPP Rev:G As per Rev C 06-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2804-1		Manufactured	No			100	Each	4.0000	1	4			
D2804-1									**			16/05/18	DAS 36 9-89
Bracket													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST474				4					
				127084				4		4			
D2805-1		Manufactured	No			100	Each	12.0000	1	4			
D2805-1									**			16/05/18	DAS 36 9-89
Stop													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				12					
				127509				12		4			
NAS1515H3		Purchased	No			100	Each	291.0000	4	16			
NAS1515H3									**			16/05/18	DAS 36 9-89
Washer													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FG				10					
				123301				10					
				GA				38					
				m129521				38		16			
				ST260				243					
				m131697				243					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Wednesday, May 18, 2016 1:45:18 PM

Page 2

Work Order ID: 146521

146521

Parent Item: D2804-041

D2804-041

Parent Item Name: Bracket Assembly

Start Date: 5/19/2016

Required Date: 5/25/2016

Start Qty: 4.00

Required Qty: 4.00

AN3C16A

Purchased

No

150

Each

50.0000

2

8

AN3C16A

BOLT

**

DAS

36

9-89

16/06/08

Location

Loc Qty

Loc Code

ST348

50

m131153

25

m131957

25

8

D2809

Manufactured

No

150

Each

31.0000

1

4

D2809

Washer

**

DAS

36

9-89

16/06/08

Location

Loc Qty

Loc Code

GA

6

127638

4

130466

2

ST011

25

138750

14

34035

11

B 146514
(4K)

MS21043-3

Purchased

No

150

Each

831.0000

2

8

MS21043-3

Nut

**

DAS

36

9-89

16/06/08

Location

Loc Qty

Loc Code

FG

80

103691

80

FP001

11

m130673

11

GA

363

m133990

363

ST302

271

m134502

271

ST304

106

m131340

106

8

Wednesday, May 18, 2016 1:45:18 PM

Shop Packet Print

Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

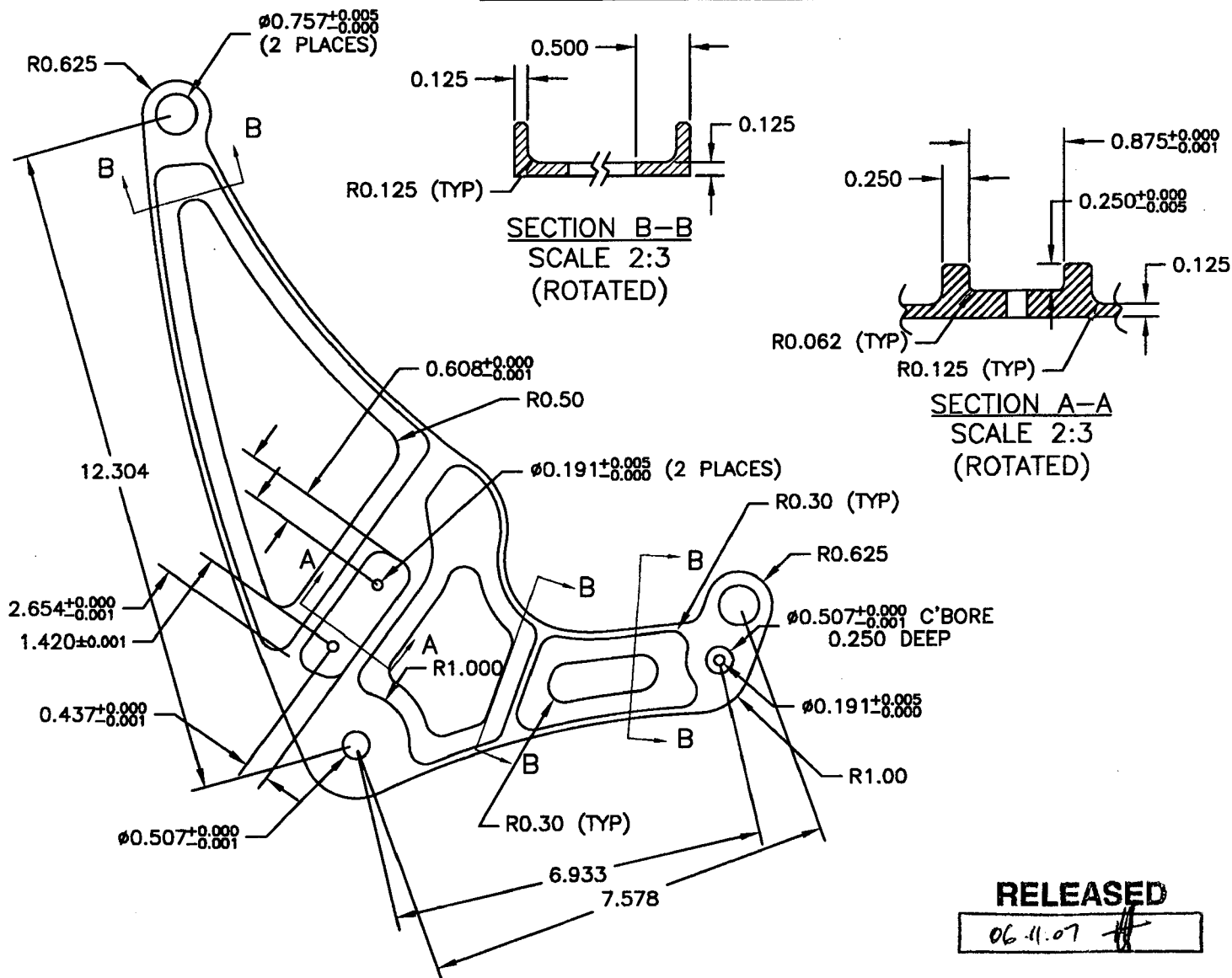
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2804	REV. C SHEET 1 OF 2
DATE 06.10.16		TITLE STA 155 BRACKET	SCALE 1:3
A	00.11.07	NEW ISSUE	
B	04.11.22	ADD CUTOUTS & -043/-044	
C	06.10.16	CHANGE GEOM. TO ADD CLEARANCE	



RELEASED

06.11.07 *[Signature]*

D2804-1 BRACKET (SHOWN). D2804-2 BRACKET (OPPOSITE)

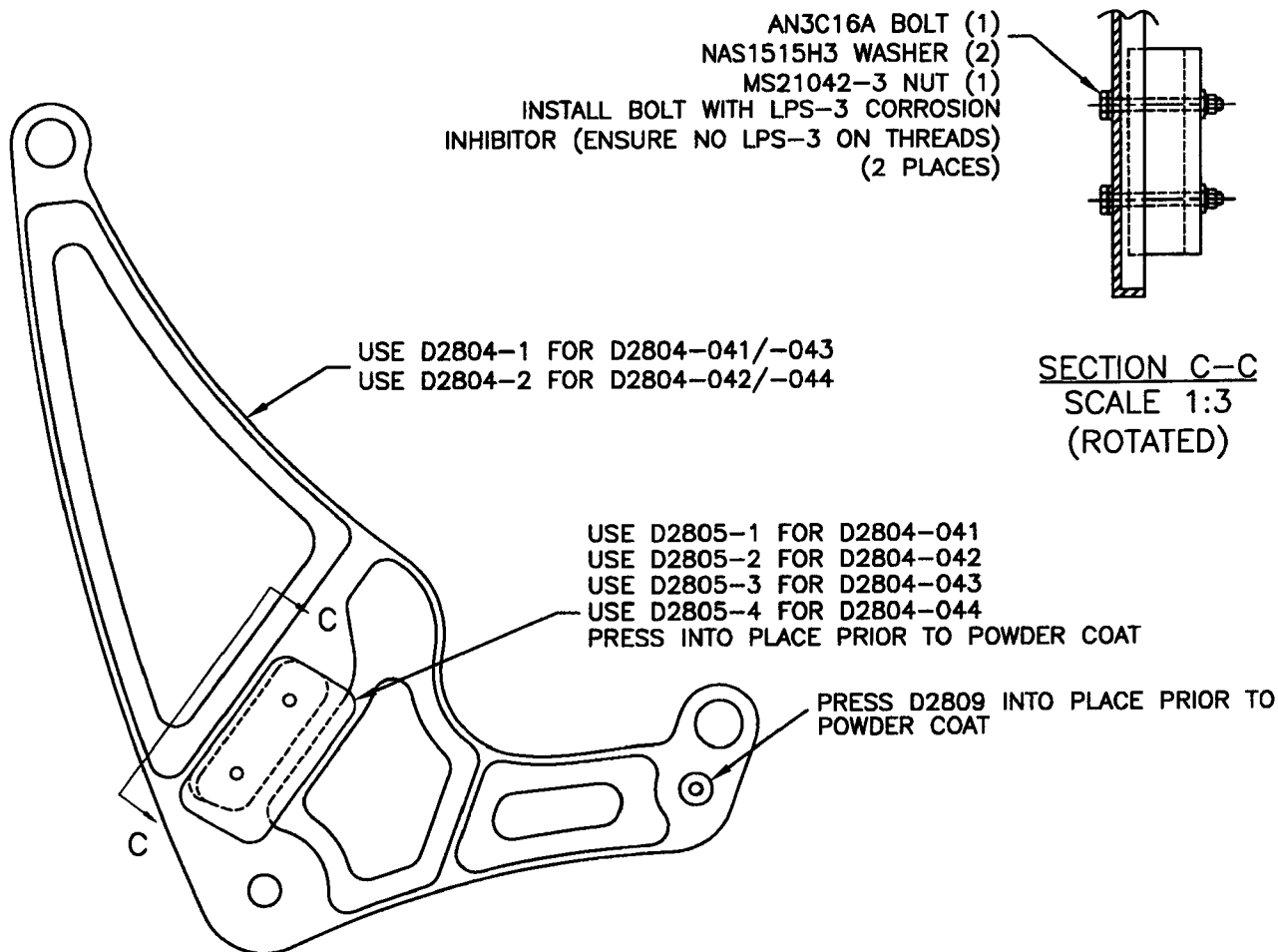
- 1) MACHINE PER DRAWING FILE "D2804-1C.SLDPRT"
- 2) MATERIAL: 6061-T6 (QQ-A-200/8) OR (QQ-A-250/11) 0.500 THICK
- 3) DEBURR TO LEAVE R0.030 - 0.063 ON ALL EDGES
- 4) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2804	REV. C SHEET 2 OF 2
DATE 06.10.16		TITLE STA 155 BRACKET	SCALE 1:3



SECTION C-C
SCALE 1:3
(ROTATED)

RELEASED

06.11.07 [Signature]

D2804-041/-043 BRACKET ASS'Y (SHOWN).

D2804-042/-044 BRACKET ASS'Y (OPPOSITE)

6) FINISH: POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3

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